

REMARKS

On October 10, 2006, the Examiner called the Applicant's attorney to solicit an election from the group of claim 11-14. The Applicant's attorney elected claim 14 without traverse. Claims 11-13 are now indicated as withdrawn from consideration. Claims 1-10 and 14-40 remain pending in the application for consideration on the merits.

Various objections to the claims have been raised regarding the use of various tunneling protocol abbreviations. The claims have been amended, where appropriate, to include definitions of the abbreviations, the first time they are used in a claim set.

Claims 8 and 21 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because of antecedent basis problems. The dependencies of these claims have been changed and it is believed that this cures the antecedent basis problems.

Before turning to the art rejections, the Examiner is respectfully requested to recognize that a "plurality of tunneling protocols" is not synonymous with "a plurality of tunneling sessions". At this juncture, it is also appropriate to explain what is meant by "a uniform manner" as that phrase appears in many of the claims. In the background of the invention section of the instant application, the Applicant explains how the different tunneling protocols are presently implemented, each in a very different manner. By

observing the subtle similarities that these different protocols share, the Applicant constructed a series of data structures and abstractions through which all of the popular tunneling protocols can be implemented in much the same way.

Claim 9 stands rejected under 35 U.S.C. §102(e) as anticipated by Davidson et al. On February 1, 2007, the undersigned spoke by telephone with the Examiner and his Primary. Agreement could not be reached regarding this rejection. It is the Applicant's position that Davidson does not teach or suggest a uniform method for implementing multiple tunneling protocols by associating an input interface, an output interface, and an information database with each of said multiple tunneling protocols. Although Davidson states in many places that different tunneling protocols could be implemented, the reference does not suggest a uniform method for implementing different protocols as claimed in claim 9, i.e. by associating different information bases with different interfaces. Nevertheless, claim 9 has been amended to include the limitation of claim 10 and claim 10 has been canceled.

Claim 10 includes the step of "associating a mapping interface and a mapping information base with each of said multiple tunneling protocols". In rejecting original claim 10, the Examiner relied on a combination of Davidson et al. with Leung. The Examiner agrees that Davidson does not teach or suggest this feature and refers to column 7, lines 31-45 of Leung. The Examiner has not pointed out the incentive to combine Davidson with Leung. The cited portion of Leung is reproduced below with

emphasis added to help the Examiner distinguish what is being claimed in amended claim 9 from what is being taught by Leung:

“In order to provide for connectivity to multiple networks, the Home Agent may have a mobility binding table, a routing table, and a mobile router/network mapping table available for its use. The mapping table may be used to associate the mobile router with one or more networks. Since the networks associated with the mobile router are typically configured at the time that the mobile router is connected to the Home Agent, the mapping table may be static during registration of the mobile router. The routing table and the mobility binding table may then be used to associate a care-of address with the mobile router and the networks. Specifically, the routing table associates each one of the networks with a care-of address through a tunnel interface to the mobile router. Similarly, the mobility binding table associates the mobile router with the care-of address.”

The only interface mentioned in this cited portion of Leung is tunnel interface. This is not a mapping interface as claimed in part “b)” of amended claim 9. The mapping interface of claim 9 is associated with each of said multiple tunneling protocols. Leung does not suggest associating any kind of interface with multiple tunneling protocols. In applying Leung to claim 10, the Examiner states that Leung teaches “a mapping table, which associates a device with networks. Presumably, then, the Examiner is reading Leung’s “mapping table” on both the claimed mapping interface and mapping information base which is incorrect on its face because it is improper to read a single element from a reference on two or more claim elements. The Examiner also seems to be reading Leung’s “devices and networks” with the claimed multiple tunneling protocols. This, also is improper because neither a device nor a network is a tunneling protocol. They are hardware devices which might implement a tunneling protocol but they are not the protocol.

The present invention implements multiple tunneling protocols by using similar data structures for each protocol. The methods of the invention provide similar structuring of processing engines for all supported tunneling protocols. For example, for each supported protocol, the invention provides an input interface, an output interface, an information base, a mapping tunnel interface and a mapping information base. See, page 12 of the instant specification. The Examiner has found some examples of an implementation of tunneling and even if one were to interpret Davidson as implementing multiple tunneling protocols, there is no suggestion that it is done in the uniform manner set out in amended claim 9. Moreover, the teachings Leung add little or nothing to the teaching of Davidson. Leung merely mentions handing off data to a tunnel interface and does not suggest a way to implement multiple tunneling protocols in a uniform manner.

For the foregoing reasons it is respectfully submitted that amended claim 9 and its dependents are allowable over the art of record.

Claims 1-4, 15, 21, and 22 stand rejected under 35 U.S.C. §103(a) as obvious over Davidson in view of Nanji.

Claim 1 claims a uniform method for implementing multiple tunneling protocols. The steps include mapping an input interface to one of a set of different tunnel interfaces and mapping the tunnel interface to an output interface. This is well illustrated in Figs. 1 and 2 of the application and the discussion of Figs. 1 and 2 in the specification. The Examiner believes that Davidson teaches all of claim 1 except mapping the tunnel

interface to an output interface. The Examiner cites Nanji for teaching this mapping and refers to lines 20-42 of col. 4 of Nanji. During the telephonic interview of February 1, the Examiner was at a loss to explain how these lines or any other lines of Nanji taught or suggested part “c)” of claim 1 and agreed to reconsider this rejection.

In view of the foregoing, it is submitted that claim 1 and its dependents are allowable over the art of record.

Turning now to independent claim 15, it also provides for “mapping input streams and output streams to tunnel interfaces in a uniform manner”. The Examiner has made the same argument regarding claim 15 as the argument regarding claim 1. During the telephonic interview of February 1, the Examiner was at a loss to explain how the cited lines or any other lines of Nanji taught or suggested mapping output streams to tunnel interfaces and agreed to reconsider this rejection.

In view of the foregoing, it is submitted that claim 15 and its dependents are allowable over the art of record.

Independent claim 22 is also a method for implementing multiple tunneling protocols in a uniform manner. The method includes “providing a plurality of tunnel interfaces, each tunnel interface having a plurality of parameters which are described in a uniform way”.

During the telephonic interview of February 1, it was pointed out by the Applicant's representative that neither of the cited references describe performing different tunneling protocols in a uniform manner. The Examiner agreed to reconsider this rejection.

In view of the foregoing, it is submitted that claim 22 and its dependents are allowable over the art of record.

Claims 31, 35, and 36 stand rejected under 35 U.S.C. §103(a) as obvious over Davidson et al. in view of D'Sa et al. The Examiner believes that Davidson teaches the tunneling interface data structure having a plurality of parameters of claim 31 but not the rest of claim 31. The Examiner further states that D'Sa teaches "storing VPN data, which stores settings for tunnels (paragraph 40), and uses VPN data to establish a tunnel (paragraph 44)."

Independent claim 31 is directed to an application programming interface (API) for implementing a plurality of different tunneling protocols.

During the telephonic interview of February 1, the Applicant's representative pointed out that D'Sa was concerned with providing security authentication and not in providing an API. It was also pointed out that none of the cited portions of D'Sa disclosed the claimed plurality of functions, or the configuration of different tunnel protocols.

In view of the foregoing, it is submitted that claim 31 and its dependents are allowable over the art of record.

In order to expedite the processing of this application, the Applicant has focused on the independent claims, namely, claims 1, 9, 15, 22, and 31. It is believed that the rejections of these claims have been overcome by amendment and/or argument. It should be understood, however, that it is not the Applicant's position that the dependent claims stand or fall with the claim from which they depend.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,

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